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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/720,092	09/27/1996	ROBERT E. KAHN	06154/008001	1226

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EXAMINER

COURTENAY III, ST JOHN

ART UNIT	PAPER NUMBER
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2151

DATE MAILED: 02/14/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

HG

Office Action Summary

Application No.

08/720,092

Applicant(s)

Kahn et al.

Examiner

St. John Courtenay III

Art Unit

2151

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Jan 28, 2002
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19, 24, and 25 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 5-17 is/are allowed.
- 6) ☒ Claim(s) 1, 18, 19, 24, and 25 is/are rejected.
- 7) ☒ Claim(s) 2-4 is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☒ The proposed drawing correction filed on Jan 28, 2002 is: a) ☒ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

ST. JOHN COURTENAY III
PRIMARY EXAMINER

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____
- 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: _____

Response to RCE

Applicant's arguments have been fully considered.

With respect to claim 1, The Examiner notes that “administrative Knowbots” that “police the system, keeping unauthorized users out” necessarily must intercede between system access requests (e.g., from other “Knowbots”) and the underlying local system service facilities. Accordingly, the rejection of claim 1, as set forth in the last office action, is maintained. Additional new grounds of rejection are also set forth for claim 1, as detailed below.

With respect to claims 18 and 19, new grounds of rejection are set forth below. A copy of the cited **Orfali** reference was previously provided.

Responsive to Applicant's demand for evidence pursuant to M.P.E.P. §2144.03, new grounds of rejection are set forth for claims 24 and 25.

In light of Applicant's arguments of record, the Examiner has reconsidered and withdrawn the remaining rejections. Dependent claim 2 appears to be allowable if rewritten to include all of the limitations of base claim 1, as the prior art does not appear to teach nor suggest the same or equivalent structure and function of the claimed “bastion object.” This claimed software component is accorded the status of a “coined term” by the Examiner. Likewise, the claimed “connector objects” of claim 9 are examined in the context of a lexicon created by Applicant.

Accordingly, the scope of the aforementioned claimed coined terms is interpreted by the Examiner as being limited by the corresponding structure and function disclosed within the instant specification.

Claims 2-4 stand objected to as being dependent upon a rejected base claim.

Claims 5-17 appear to be allowable, subject to the results of a final search.

Claim Rejections - 35 U.S.C. § 103

The following is a quotation of 35 U.S.C. § 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

Claim 1 is rejected under 35 U.S.C. § 103 as being unpatentable over Antes, Gary M., "Let your 'knowbots' do the walking," Computerworld, May 13, 1991, pp(2), in view of Steinberg, Don, "Demon knowbots (intelligent software robots)," PC-Computing, v3, n1, pp(4), Jan, 1990.

As per claim 1:

Antes discloses the invention substantially as claimed:

Antes teaches a method for use in a distributed system for processing a mobile program that has the ability to move from node to node in the distributed system [e.g., page 1, line 24].

Antes teaches an operating environment in each of the nodes that provides service facilities (e.g., databases) useful to the mobile program [e.g., page 1, line 30].

However, **Antes** does not *explicitly* disclose the following additional limitations:

Steinberg teaches an operating environment running a supervisor process [e.g., administrative knowbots, page 3, line 3] that allows the mobile program indirect access to make use of the service facilities [page 3].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to improve upon the system taught by **Antes** by implementing the improvements detailed above because it would provide **Antes's** system with the enhanced capability of keeping unauthorized users out [e.g., page 3, line 4].

Claims 18 & 19 are rejected under 35 U.S.C. § 103 as being unpatentable over Antes, Gary M., "Let your 'knowbots' do the walking," Computerworld, May 13, 1991, pp(2), in view of Steinberg, Don, "Demon knowbots (intelligent software robots)," PC-Computing, v3, n1, pp(4), Jan, 1990, and further in view of Orfali et al., "Client/Server Programming with CORBA Objects," OS/2 Magazine, Sept. 1994, pp(8).

As per independent claim 18:

Andtes, as modified by **Steinberg**, teaches the invention substantially as claimed.

Andtes, as modified by **Steinberg**, teaches a method for aiding communication with a mobile program executing in operating environments provided at nodes of a distributed system (as discussed above in the rejection of claim 1).

However, **Andtes & Steinberg** do not *explicitly* disclose the following additional limitations:

Orfali teaches maintaining a name space that uniquely identifies types of information to be interchanged as part of the communication [e.g., page 3, #7, i.e., "Register the run-time objects with the implementation repository" – see the disclosed "object reference"], and using a name within the name space to identify a type of information to be interchanged [e.g., page 3, #7, i.e., "Register the run-time objects with the implementation repository"].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to improve upon the combined system taught by **Andtes & Steinberg** by implementing the improvements detailed above because it would provide their system with the enhanced capability of knowing which object classes are supported on a particular server [Orfali, page 3, discussion #7].

As per claim 19:

Andtes, as modified by **Steinberg** and **Orfali**, teaches the mobile program registers an interface which includes the name of a type of information that is to be interchanged [e.g., **Orfali**, page 3, #7, i.e., "Register the run-time objects with the implementation repository"].

Claim Rejections - 35 U.S.C. 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 1, 24 & 25 are rejected under 35 U.S.C. § 102(a) as being anticipated by Vanderburg, Glenn L., et al., "Tricks of the Java Programming Gurus," Sams.net Publishing, see Chapter 33, entire chapter, pp(14), 1996.

As per claim 1:

- **Vanderburg** teaches a method for use in a distributed system for processing a mobile program that has the ability to move from node to node in the distributed system [e.g., see "Java" discussion beginning page 1]. The Examiner notes that mobile Java programs (i.e., applets) anticipate the claimed limitations.
- **Vanderburg** teaches an operating environment in each of the nodes that provides service facilities useful to the mobile program [e.g., a

Java Virtual Machine; see also Java security and native method discussion beginning page 1],

- **Vanderburg** teaches an operating environment running a supervisor process [i.e., the Java Virtual Machine and associated security discussion, beginning page 1] that allows the mobile program indirect access to make use of the service facilities [e.g., see "ExtensibleSecurityManager.java" code listing and associated native method discussion beginning page 5]. Java byte codes "indirectly interact" via the operating environment, as they are interpreted by the Java virtual machine at run time.

As per claim 24:

Vanderburg teaches a method for controlling interaction between a mobile program and an application running in an operating environment provided at a node of a distributed system comprising:

- defining a trusted portion of the operating environment which provides trusted services to the mobile program [e.g., see discussions of "Security in Native Method Libraries," page 1, and the "Extensible Security Manager," beginning page 4 – see code listing page 5-10],
- requiring portions of the application running in the operating environment to be registered as trusted, [e.g., see "registered" code as marked (underlined by Examiner) in the code listing pages 7-10], and
- permitting indirect interaction via the operating environment between the mobile program and the application running in the operating environment only if the portions of the application required to be registered have been registered [e.g., see "registered" code as marked (underlined by Examiner) in the code listing pages 7-10; e.g., see "Registering Specialized Security Managers" discussion beginning page 12]. The Examiner notes that the code listing is dated on pages 5 and 6 as Feb. 31, 1996. Java byte codes "indirectly interact" via the operating environment, as they are interpreted by the Java virtual machine at run time.

As per claim 25:

This claim is rejected for the same reasons detailed above in the rejection of claim 24, and also for the following additional reasons:

Vanderburg teaches a method for enabling a mobile program to carry out defined functions including otherwise unsafe functions, though the use of extensions comprising:

- coding safe extensions to an operating environment and to an interpretive language under which the mobile program runs, [e.g., see "ExtensibleSecurityManager.java" code listing beginning page 5, entire code listing and supporting discussion], and
- permitting the mobile program to carry out the defined functions by making use of the extensions [e.g., see "registered" code as marked (underlined by Examiner) in the code listing pages 7-10; e.g., see "Registering Specialized Security Managers" discussion beginning page 12].

Prior Art not relied upon:

Please refer to the references listed on the attached PTO-892 which are not relied upon in the claim rejections detailed above.

Objective — Reducing and Simplifying the areas of disagreement:

- The Examiner solicits Applicant's cooperation in *reducing and simplifying the areas of disagreement* by doing the following: 1) amending the independent claims in a manner fully supported by the specification to clearly distinguish over the prior art of record, AND/OR 2) directing clear and concise arguments to the *specific claim language and claim elements* that Applicant believes are not fairly taught nor suggested by the cited prior art of record. Applicant should cancel claims where appropriate. Applicant should preferably avoid arguing general differences between the cited references and the instant invention as disclosed in the specification. Your cooperation is appreciated.

◦ **M.P.E.P. 2001.06(b) Information Relating to or from Copending United States Patent Applications**

The individuals covered by 37 CFR 1.56 have a duty to bring to the attention of the examiner, or other Office official involved with the examination of a particular application, information within their knowledge as to other copending United States applications which are "material to patentability" of the application in Question, as set forth by the Court in *Armour & Co. v. Swift & Co.*, 175 USPQ 70, 79 (7th Cir. 1972).

Format of Amended Claims pursuant to 37 C.F.R. 1.121:

37 CFR § 1.121 amendments were optional on November 7, 2000 and became mandatory on March 1, 2001.

◦ Please help expedite the prosecution of this application by including a clean set of all pending claims, consolidating all previous versions of pending claims from a series of separate amendments into a single clean version in a single amendment paper. This submission of a clean version of all of the pending claims will be construed as directing the cancellation of all previous versions of any pending claims. No marked-up version will be required to accompany the clean version where no changes other than the consolidation are being made. 37 CFR § 1.121.

For details of the PBG final rules please refer to the following PTO website:
<http://www.uspto.gov/web/offices/dcom/olia/pbg/index.html>

Please verify the CORRECT SERIAL NUMBER in all responses:

◦ All incoming papers received by the PTO are matched with the application file by application serial number. Failure to include a correct application serial number on PTO correspondence will result in significant processing delays. The use of the correct PTO application serial number is required on all future correspondence.

Please verify your CORRECT MAILING ADDRESS:

· If your mailing address changes after the filing of the instant application you must promptly notify the PTO of your **CHANGE OF ADDRESS** to prevent PTO correspondence being returned by the Post Office as undeliverable.

How to Contact the Examiner:

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to **St. John Courtenay III** whose voice telephone number is **(703) 308-5217**. A voice mail service is also available at this number.

- **All responses sent by U.S. Mail should be mailed to:**
Commissioner of Patents and Trademarks
Washington, D.C. 20231
- **Hand-delivered responses should be brought to Crystal Park Two, 2021 Crystal Drive, Arlington, VA., Fourth Floor (Receptionist).** All hand-delivered responses will be handled and entered by the docketing personnel. Please do not hand deliver responses directly to the Examiner.

IMPORTANT CHANGE IN PTO FAX POLICY:

- **AFTER-FINAL** faxes must be signed and sent to: **(703) 746-7238**.
- **OFFICIAL** faxes must be signed and sent to: **(703) 746-7239**.
- **NON OFFICIAL** faxes should not be signed, please send to: **(703) 746-7240**, or to Examiner Courtenay's desktop computer at **703-746-5472**.

All OFFICIAL faxes will be handled and entered by the docketing personnel. The date of entry will correspond to the actual FAX reception date unless that date is a Saturday, Sunday, or a Federal Holiday within the District of Columbia, in which case the official date of receipt will be the next business day. The application file will be promptly forwarded to the Examiner unless the application file must be sent to another area of the Office, e.g., Finance Division for fee charging, etc.

To avoid ongoing Washington D.C. area mail processing delays, the Examiner requests that Applicant direct all communications to the PTO by fax. All incoming faxes are securely stored on PTO computers that are dedicated to fax reception. If you send a fax, please do not send duplicate papers via U.S. mail.

- Any inquiry of a general nature or relating to the status of this application should be directed to the **TC 2100 Group receptionist: (703) 305-3900**.

Please direct inquiries regarding fees, paper matching, and other issues not involving the Examiner to:

Technical Center 2100 CUSTOMER SERVICE: 703 306-5631

Normal Flex work schedule: Sun. 1/2 day, Sat. 1/2 day, Monday, Tuesday off, Wed., Thurs., Friday.

ST. JOHN COURTENAY III
PRIMARY EXAMINER



Paper #23